# PROJECT DESCRIPTION

### GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE MODIFICATION OF THE TRAFFIC CONTROL SIGNAL AT MD 450 (ANNAPOLIS ROAD) AND FORBES BLVD. IN PRINCE GEORGES COUNTY. MD 450 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

#### INTERSECTION OPERATION

THIS INTERSECTION IS TO BE MODIFIED TO OPERATE IN A NEMA SIX PHASE, FULLY TRAFFIC-ACTUATED MODE, THERE WILL BE EXCLUSIVE/PERMISSIVE LEFT TURNS ON THE MD 450 APPROACHES. THE THROUGH MOVEMENTS ON MD 450 WILL OPERATE CONCURRENTLY. THE THROUGH MOVEMENTS ON MD 193 WILL OPERATE CONCURRENTLY.

#### CONTROLLER REQUIREMENTS

THE EXISTING CONTROLLER AND CABINET WILL BE UTILIZED.

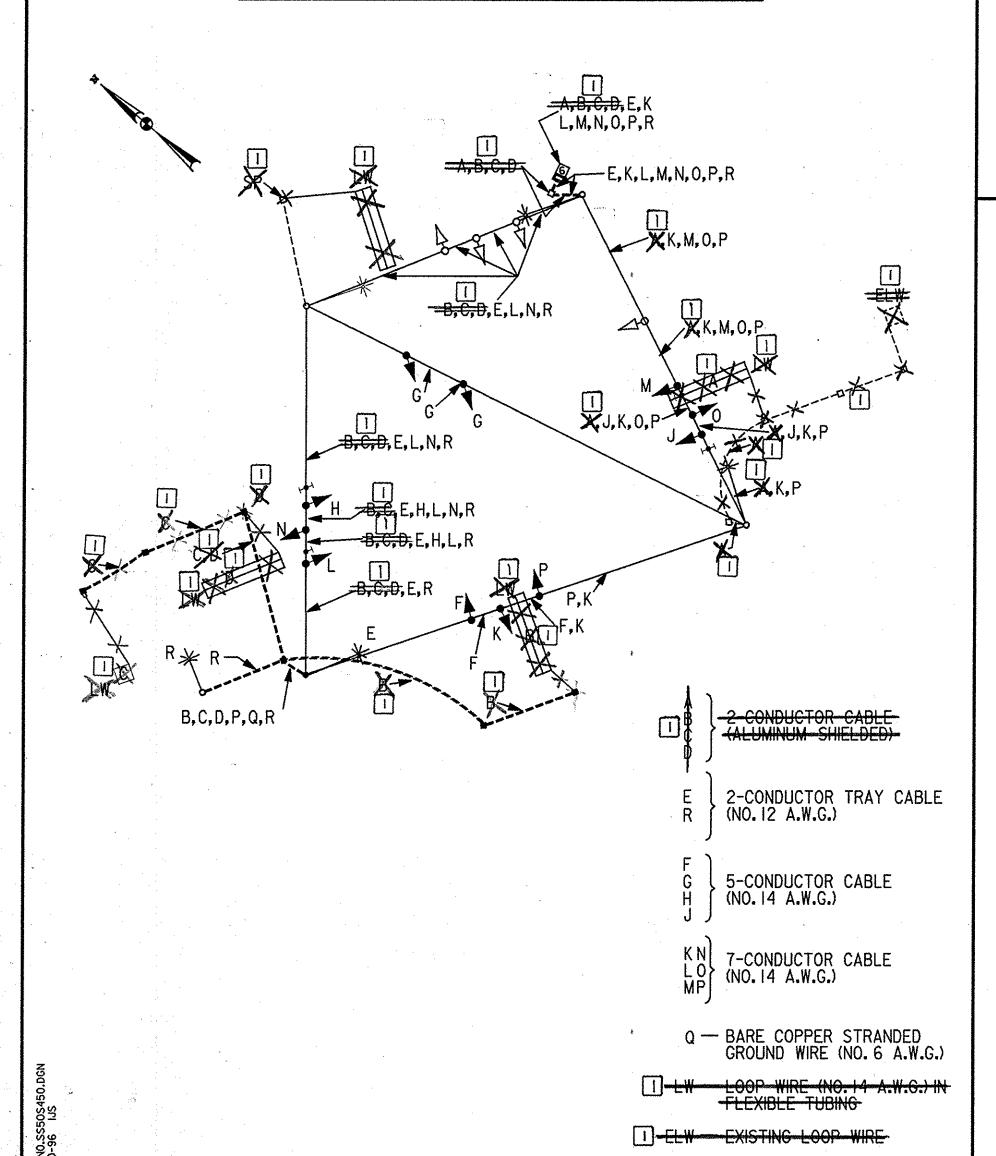
#### SPECIAL NOTE

72 HOURS PRIOR TO ANY WORK ON THE TRAFFIC SIGNALS, THE CONTRACTOR SHALL NOTIFY THE DISTRICT 3 TRAFFIC SECTION REPRESENTATIVE, MR. RICHARD BUETTNER (301-513-7316) AND THE SIGNAL OPERATIONS SUPERVISOR, MR. EDWARD RODENHIZER (410-787-7652).

FORBES BLVD. TO THE NORTH WILL BE CONSTRUCTED WHILE UNDER TRAFFIC. THIS MAY REQUIRE THE RELOCATION OF SIGNAL HEADS, NEW LOOP DETECTORS AND STOP LINE DURING PHASE III. THESE MODIFICATIONS WILL BE AS DIRECTED BY THE ENGINEER AND THE OFFICE OF TRAFFIC AND SAFETY.

ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC AND ARE NOT TO BE CONSIDERED COMPLETE BECAUSE THESE UNDERGROUND AND OVERHEAD UTILITIES MAY BE MODIFIED PRIOR TO AND DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL EQUIPMENT WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE PROJECT ENGINEER IMMEDIATELY.

## WIRING DIAGRAM



## EQUIPMENT LIST

### A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION

CATEGORY CODE NO.	SPEC. SECTION	QUANTITY	DESCRIPTION
960015	814	5 EA.	12 IN. I WAY 3 SECTION (R,Y,G) ADJUSTABLE POLYCARBONATE VEHICLE SIGNAL HEAD WITH SPAN MOUNTING HARDWARE AND TUNNEL VISORS
960020	. 814	2 EA.	12 IN. I WAY 5 SECTION (R,Y,G,YA,GA) ADJUSTABLE POLYCARBONATE VEHICLE SIGNAL HEAD WITH SPAN MOUNTING HARWARE AND TUNNEL VISORS
900000	814	2 EA.	8 IN./12 IN. I WAY 5 SECTION (8"R,Y,G - 12"YA,GA) ADJUSTABLE POLYCARBONATE VEHICLE SIGNAL HEAD WITH SPAN MOUNTING HARDWARE AND TUNNEL VISORS

# PHASE DIAGRAM

	H R	2 (R) (Y)	N@>@	4 (R)	5 (P)(Y)	(Sa)	7 @9	8 R Y	9	10 RE	3 3	12 ®	
DUACE I . E	۩ R	۩ I R		F R	R R	<u> </u>	<b>©</b> ©	© R		<u> </u>	<u>©</u>	<u> </u>	,
PHASE I + 5 I + 5 CHANGE TO		<u> </u>	R HASE 2	<b>4</b> -G−	<u></u> —G—	I R	<u>R</u>	<u>                                    </u>	<u>R</u>	R	<u> </u>	<u>IR</u>	
PHASE I + 6	<b>d</b> G-	<b>d</b> G	G	R	R	R	R	R	R	R	R	R	<b>↑</b>
I CHANGE	<b>4</b> -G	<b>4</b> -Y—	G	R	R	R	R	R	R	R	R	R	
PHASE 2 + 5	R	R	R	<b>d</b> -G-	<b>d</b> -G	G	R	R	R	R	R	R	4
5 CHANGE	R	R	R	<b>4</b> -Ÿ—	<b>G</b> <b>G</b>	G	R	R	R	R	R	R	<b>↓</b>
PHASE 2 + 6	G	G	G	G	G	G	R	R	R	R	R	R	. 🔷
2 + 6 CHANGE	ΙΥ	Y	Y	Y	Υ	Υ	R	R	R	R	R	R	
PHASE 4 + 8	IR	R	R	R	R	R	G	G	G	G	G	G	1 1
4 + 8 CHANGE	R	R	R	R	R	R	Y	Y	Υ	Υ	Ý	Y	↓
FLASHING OPERATION	F Y	F Y	F/Y	F/Y	FY	FY	FR	FR	FR	FR	FR	F R	† <b>*</b>

### EQUIPMENT LIST

FHWA REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL: SHEETS
3	MD	SEE TITLE SHEET	350	465

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

:	2	EGORY E NO.	SPEC. SECTION	QUAN	TITY	DESCRIPTION
	1142	210	104	250	L.F.	6 IN. YELLOW REMOVABLE PREFORMED PAVEMENT MARKING TAPE
	1142	245	104	97	L.F.	24 IN. WHITE REMOVABLE PREFORMED PAVEMENT MARKING TAPE
	203	030	205	The same of the sa	C.Y.	TEST PIT EXCAVATION
}	801	004	801	4.65	C.Y.	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
	802	501	810	12	L.F.	FURNISH AND INSTALL NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
	805	125	805	385	L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 40 RIGID PVC CONDUIT - TRENCHED
	<u> </u>	<del>IĠO</del>	805	25		FURNISH AND INSTALL I IN. LIQUID TIGHT NON-METALLIC CONDUIT FOR- DETECTOR SLEEVE
	8110	001	811	<b>□5</b> X	EA.	FURNISH AND INSTALL ELECTRICAL HANDHOLE
	837	001	804	ı	EA.	FURNISH AND INSTALL GROUND ROD - 3/4 IN. DIAMETER X 10 FT. LENGTH
	860	015	814	5	EA.	INSTALL 12 IN. I WAY 3 SECTION (R, Y, G) POLYCARBONATE SIGNAL HEAD - SPAN MOUNT
	860	020	814	2	EA.	INSTALL 12 IN. I WAY 5 SECTION (R,Y,G,YA,GA) POLYCARBONATE SIGNAL HEAD - SPAN MOUNT
	860	265	814	i	EA.	RELOCATE EXISTING SIGNAL HEAD
	<u> </u>	04	-810	<del>2105</del> -		FURNISH AND INSTALL ELECTRICAL CABLE 2 CONDUCTOR (ALUMINUM SHIELDED)
	8611	07	810	115	L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G.)
	8611	08	810	1420	L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G.)
	8611	16	810	825	L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 A.W.G.)
	1 <del>-86</del> 2	<del>                                      </del>	810			FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 A.W.G.)
	1-862	H02	815	<del>- 5</del> 26-		FURNISH AND INSTALL SAWCUT FOR SICNAL (LOOP DETECTOR)
	866	104	818	-	EA.	FURNISH AND INSTALL 20 FT. LIGHTING ARM ON SIGNAL STRUCTURE
	869	101	819	293	L.F.	FURNISH AND INSTALL STEEL SPAN WIRE - 1/4 IN. DIAMETER
	862	102	819	293	L.F.	FURNISH AND INSTALL STEEL SPAN WIRE - 3/8 IN. DIAMETER
,	800	000	805	95	L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
	800	000	813	4	ĖA.	RELOCATE EXISTING OVERHEAD SIGN
	800	000	814	2	EA.	INSTALL 8N./12 IN. I WAY 5 SECTION (8"R,Y,G - 12"YA,GA) POLYCARBONATE SIGNAL HEAD - SPAN MOUNT
	800	000	806	1	EA.	FURNISH AND INSTALL 250 WATT HIGH PRESSURE SODIUM VAPOR LUMINAIRE WITH PHOTO-CELL
	800	000	818	l	EA.	FURNISH AND INSTALL 12 IN. X 32 FT. STRAIN POLE (2-PLY)
	800	000	XXX	LUMP	SUM	REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT
ı			-	* * * * * * * * * * * * * * * * * * *		

RED LINE REV. NO. 1 7-14-97

TEMPORARY SIGNAL PHASE III

TS-4 MARYLAND DOT - STATE HIGHWAY ADMINISTRATION Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION

MD 450 (ANNAPOLIS ROAD) AT FORBES BLVD.

LOG MILE NO. 16045006.59 DATE 8 /- /96 DRAWN BY: S. BLOSS PLAN SHEET NO .: SHEET NO. CHECK BY: T. HANNAN

ASST. DIVISION CHIEF. TEDD ASST. DISTRICT ENGINEER, TRAFFIC THE WILSON T. BALLARD CO. CONSULTING ENGINEERS AUGUST 1996 - WTB MODIFY EXISTING SIGNAL SHA NO. PG9005171 CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION

REVISIONS

OWINGS MILLS, MARYLAND

IRECTOR, OFFICE OF TRAFFIC & SAFETY

APPROVALS

PRINCE GEORGES TS-3600-X3-GI

350 OF 465

DWG. NO.